

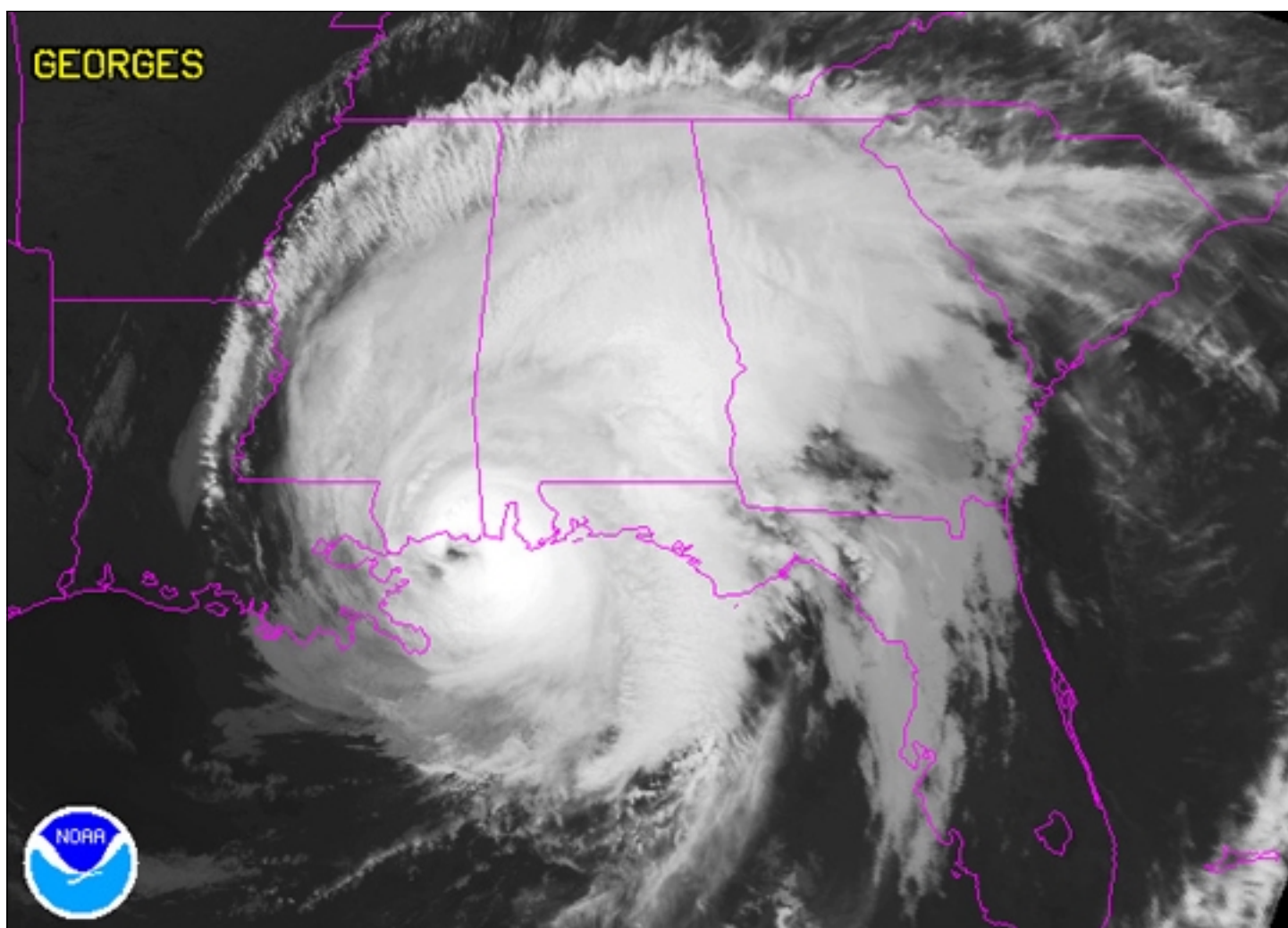


Naval Station Pascagoula's 'Homeport' presents

StormWatch

2003 Hurricane and Disaster Guide

June 1, 2003



Satellite imagery by the National Oceanic and Atmospheric Administration (NOAA)

Hurricane Georges struck the Gulf Coast of Mississippi and Alabama the morning of Sept. 28, 1998. It caused more than \$1 billion in damage just along the Gulf Coast.

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2003 North Atlantic Hurricane Storm Names

Ana	Henry	Odette
Bill	Isabel	Peter
Claudette	Juan	Rose
Danny	Kate	Sam
Erika	Larry	Teresa
Fabien	Mindy	Victor
Grace	Nicholas	Wanda

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Damage toll high from Hurricane Georges in 1998

The National Climatic Data Center reports that Hurricane Georges, from September 21-30, 1998, left a trail of destruction in the Caribbean region and across the southern U.S. Gulf coast.

Estimates indicate more than 600 people were killed as the storm pushed its way across the islands of the Caribbean.

There were four Georges-related fatalities on the U.S. mainland. An elderly woman died from heat stress while being evacuated from New Orleans. Two more people died in Florida and Louisiana in fires started by candles during power outages, and another person died as a result of an auto accident on a slick highway near Crestview, Florida.

Puerto Rico reported 12 fatalities.

Hurricane Georges made landfall at Ocean Springs, between Biloxi and Pascagoula, Miss. 125 mph wind gusts were recorded at Keesler Air Force Base in Biloxi. Airports and highways were closed, curfews imposed, and flash-flood warnings were issued.

More than 230,000 homes were without power at the peak of the storm. Storm surge was estimated at 10 feet. Red Cross sheltered 9,000 people.

Flash flood watches were set for 22 counties in Alabama. Gusts were recorded up to 85 mph. 25-foot waves clipped off fishing piers on the Gulf Coast.

Mandatory evacuations were called for two coastal counties.

Associated Press news stories at the time report that National Guard troops were directing traffic along the major roads in Pascagoula and Moss Point. Many businesses were shuttered, and long lines formed at the few restaurants that were able to serve food.



Associated Press photo by Dave Martin

Hurricane Georges, in late September 1998, left a severe damage toll in its wake. Several homes on Dauphin Island were destroyed like the one pictured, and hundreds of others were severely damaged by high winds and heavy tidal surge.

Shelter populations, at the peak some 15,000 people, fluctuated as many residents returned home to find them inhabitable.

Flooding and power outages were reported all along the Gulf Coast. Virtually all of Jackson County, and the western side of Mobile, Ala., west of Interstate 65, were without power.

Mississippi Gov. Kirk Fordice asked that at least three coastal counties be declared major disaster areas.

James Lee Witt, Federal Emergency Management Agency director, said more than 1,000 homes were flooded in coastal Mississippi, and coastal Alabama appeared to have sustained heavier damage, although at the time of the report, storm inspections had

not ended.

In Alabama, the deluge that pounded the state caused about \$1 million damage to roads and bridges in Mobile.

President Clinton declared a major disaster exists in 10 Alabama counties, an order that makes federal funding available to individuals affected by the storm.

Rising waters from Alabama turned the roads along Highway 90 in Moss Point, Miss., into one big swamp.

Damage estimates for the U.S. including Puerto Rico were estimated at more than \$5.9 billion. Extreme flooding was reported with rainfall amounts in excess of 20 to possibly 30 inches along portions of the southern U.S. Gulf coast.

Mobile, Ala., received 13.0 inches of rain from the storm,

which boosted the monthly total to 23.0 inches, breaking the September record of 16 inches set more than 100 years ago.

The highest individual storm total reported thus far is Munson, Fla., which reported 25.0 inches of rain from Georges.

Naval Station Pascagoula could be susceptible to hurricane activity and storm surge. The best defense is always a good offense.

The following pages contain a hurricane tracking map, severe weather definitions, and safety checklists. Much of this same information, as well as evacuation information and emergency phone numbers, is contained in Naval Station Pascagoula instruction (NAVSTA-PASINST) 3006. 1D, Ch. 4.

StormWatch

Important definitions and associated damage

Hurricanes are tropical cyclones in which winds reach constant speeds of 74 miles per hour (64 knots) or more, and blow in a large spiral in a counter-clockwise direction around a relatively calm center called the eye.

Hurricanes form over warm tropical and sub-tropical waters of the world.

The term "hurricane" originated from Spanish and Caribbean Indians who used the word as a reference for the big winds they believed to be caused by evil spirits.

Commonly referred to as "the greatest storm on earth", hurricanes are like no other storm ever seen or experienced on this planet. Every year hurricanes bring destruction to coastlines and islands in their path.

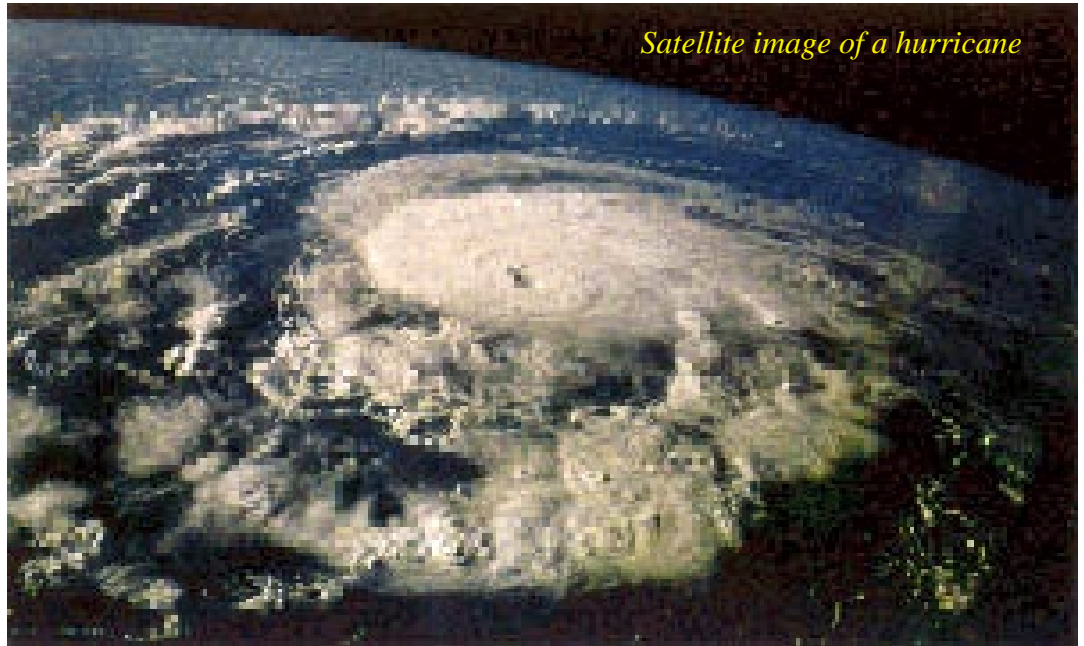
Hurricanes, which strike the East and Southeast United States, originate in the tropical and sub-tropical waters of the North Atlantic Ocean, Caribbean Sea, and Gulf of Mexico.

Hurricane season begins June 1 and runs through Nov. 30. During this period, the hurricane becomes a significant threat to the Gulf Coast, posing the greatest hazard in August, September, and October.

In an average year, more than 100 hurricanes occur globally.

Though the hurricane is not the largest, nor even the most violent storm ever encountered its strong winds, torrential rains and associated storm surge combine to create a phenomenon like no other.

They benefit mankind because they are a major source of rain for those continental corners which fall beneath their tracks. By contrast, their tragedy is the death and destruction they leave in their wake, the most significant of which is caused by storm surge.



Satellite image of a hurricane

Important definitions:

Tropical Storm - A tropical cyclone with winds of 34 to 63 knots (40-73 MPH). At this stage of a tropical cyclone, a name is given. An eye may be apparent.

Hurricane - A tropical cyclone with winds in excess of 63 knots (73 MPH). Eye is fully developed. This term is used only in the northwestern hemisphere.

Hurricane Watch - Issued whenever a hurricane becomes a threat to your area.

Hurricane Warning - Issued when winds of hurricane force or a combination of dangerously high water and very rough seas are expected in your area within 24 hours.

Storm Surge - A large dome of water that sweeps across the coastline where a hurricane is expected to make landfall. It is particularly dangerous in the northeast quadrant of the storm as it makes landfall. Immediately along the coast, storm surge is the greatest threat to life and property.

Hurricane categories and associated damage:

ONE - Winds 64-82 knots (74-95 mph) or storm surge 4-5 feet above normal. Minimal structural damage. Mobile homes at risk. Power lines, signs and tree branches are blown down.

TWO - Winds 83-95 knots (96-110 mph) or storm surge 4-

5 feet above normal. Moderate structural damage to walls, roofs, and windows. Mobile homes at greater risk. Large signs and tree branches are blown down.

THREE - Winds 96-113 knots (111-130 mph) or storm surge 9-12 feet above normal. Extreme structural damage to walls, roofs, windows, and trees blown down.

FOUR - Winds 114-135 knots (131-155 MPH) or storm surge 13-18 feet above normal. Extreme damage to structures and roofs with trees uprooted.

FIVE - Winds greater than 135 knots (155 mph) or storm surge greater than 18 feet above normal. Structures destroyed. Catastrophic damage.

Jackson County, Mississippi, Disaster Shelters

Prior to each emergency, the American Red Cross will designate shelters that will be open during an emergency. Some of them are listed below.

Mississippi Gulf Coast Community College, Gautier
Vanceleave High School
East Central High School
Jackson County Court House
St. Martin East Elementary School
Pascagoula High School
Eastlawn Elementary School

Colmer Jr. High School
Fair Elementary School
Singing River Elementary School
Charlotte Hyatt Elementary School
Ed Mayo Elementary School
Kreole Elementary School
Moss Point High School
Ocean Springs Middle School



There is a small number of individuals who are in a relatively normal state but who are being treated as if it is all about the person and not the

Student Center

[illegible]

Debra M. K. Lewis, M.D.

to make his whole body of steel, except the arm, then is prepared to do any work we wish him to perform, and he will do it.

Learn to document

UNITED



StormWatch

Hurricane survival checklist, necessary information

The National Weather Service issues advisories when hurricanes are approaching the United States mainland.

A Hurricane Watch means a hurricane may threaten an area within 24-36 hours. A Hurricane Watch is not a hurricane warning, but a first alert for emergency forces and the general public in prospectively threatened areas. When your area is under a Hurricane Watch, continue normal activities, but stay tuned to radio or television for all Weather Service advisories.

A Hurricane Warning becomes part of advisories when a hurricane is expected to strike an area within 24 hours or less. Advisories containing hurricane warnings include an assessment of flood danger in coastal and inland areas, small craft warnings, gale warnings for the storm's periphery, estimated storm effects, and recommended emergency procedures.

Radio and television stations will broadcast latest hurricane advisories. Local government advice and instructions will also be issued over these stations.

When a *Hurricane Watch* is issued you should:

- ✓ Listen for weather updates as hurricanes are unpredictable. Keep informed.

- ✓ Have your car ready. Fill the gas tank and check oil, water, and maintenance.

- ✓ Check emergency evacuation supplies. Obtain adequate supplies of special/prescription medicines, baby food, diapers, and sanitary needs.

- ✓ Board up windows. Reduce the risk and danger of broken windows and flying glass. Remove any tree limbs near electrical wires and the house.

- ✓ Fill empty freezer space with reusable ice containers or fill empty milk containers about four-fifths full of water, cap the containers loosely and place in

empty space.

- ✓ Check your home hurricane survival kit.

When a *Hurricane Warning* is issued.

- ✓ Keep your radio or television on and listen for the latest weather service warnings and advisories. When a hurricane approaches, also listen for tornado watches and warnings. If power fails, use a portable battery radio or your car radio.

- ✓ Check your battery-powered equipment. Your radio may be your only link with the world outside the hurricane, and emergency cooking facilities and flashlights will be essential if utility services are interrupted.

- ✓ Plan your time before the storm arrives. Waiting until the "last minute" might mean you'll be stranded.

- Leave beaches, waterways, rivers, creeks or other low-lying areas that may be swept by high tides or storm surge. Leave early; don't run the risk of being stranded.

- ✓ Moor your boat securely before the storm arrives, or move it to a designated safe area. When your boat is moored, leave it, and don't return once the wind and waves are up.

- ✓ Board up windows or protect them with storm shutters and close draperies. Danger to small windows is mainly from wind-driven debris. Larger windows may be broken by wind pressure.

- ✓ Secure outdoor objects that might be blown away or uprooted. Garbage cans, garden tools, toys, signs, porch furniture, and a number of other harmless items become missiles of destruction in hurricane winds. Anchor them or store them inside before the storm strikes.

- ✓ Store drinking water in clean, closed containers, such as jugs, bottles, and cooking pots. Your town's water sup-

ply may be contaminated by flooding or damaged by the hurricane. Clean and fill bathtubs with water to use for pets or toilet flushing.

- ✓ Keep your car fueled. Service stations may be inoperable for several days after the storm strikes due to flooding or interrupted electrical power.

- ✓ Unless advised to evacuate, stay home if your house is sturdy and on high ground. If it is not or you live in a mobile home, move to a designated shelter and stay there until the storm is over.

- ✓ Remain indoors during the hurricane. Travel is extremely dangerous when winds and tides are whipping through your area.

- ✓ Beware of the "eye" of the hurricane. If the calm storm center passes directly overhead, there will be a lull in the wind lasting a few minutes to half-an-hour or more. Stay in a safe place unless emergency repairs are absolutely neces-

sary. But remember, at the other side of the "eye" the winds rise very rapidly to hurricane force and come from the opposite direction.

If you are warned to evacuate your home and move to another location (including pre-designated hurricane shelters) temporarily, there are certain things to remember and do. Here are the most important ones:

- ✓ Follow the instructions and advice of local authorities. If you are told to evacuate, do so promptly. If you are instructed to move to certain locations, go there—don't go anywhere else. If certain travel routes are specified or recommended, use those routes rather than trying to find short cuts of your own. If you are told to shut off your water, gas, or electric service before leaving home, do so. Also find out from the radio or TV where emergency housing and mass

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Hurricane Survival Kit

- ☐ Battery-operated radio (additional "Weather Radio" strongly recommended)
- ☐ Flashlight
- ☐ Spare batteries for radios and flashlight
- ☐ Emergency cooking facilities, i.e. camp cook stove and fuel
- ☐ Lanterns and extra fuel
- ☐ Charcoal
- ☐ Matches in a waterproof container
- ☐ First Aid Kit
- ☐ Canned foodstuffs and canned milk
- ☐ Baby food
- ☐ Bottled water
- ☐ Bleach
- ☐ Toiletries
- ☐ Extra medicine
- ☐ Plywood for boarding up windows
- ☐ Sheets of plastic
- ☐ Duct tape or masking tape

StormWatch

Important hurricane survival information ...

Continued from page 23

feeding stations are located, in case you need to use them. For Naval Station Pascagoula family members, the designated Safe Haven at Naval Air Station Meridian is the recommended site for evacuation.

✓Secure your home before leaving. If you have time, and if you have not received other instructions from the local authorities, you should lock your house doors and windows. Park your car in the garage (unplug the automatic garage door

opener), carport, or driveway, close windows, and lock the car (unless you are driving to your new temporary location).

✓Travel with care. If the local authorities are arranging transportation for you, precautions will be taken for your safety.

If you are driving your own car to another location, keep in mind these things:

✓Leave early enough so as not to be stranded by flooded roads, fallen trees, and wires.

✓Make sure you have enough gasoline in your car.

✓Follow recommended routes.

✓As you travel, keep listening to your radio for additional information and instructions from your local authorities.

✓People who plan to use a shelter should remember that pets are not allowed in shelters. Naval Air Station Meridian, the safe haven for Naval Station Pascagoula personnel, will no longer accept pets either. If you

choose to leave pets at home, you should leave them with enough food and water to last until you return, with water being much more important than food. Check with local kennels.

✓If you evacuate, be sure to take with you something that proves your local address. If your area is hit by the storm, proof of your local address will be required to allow you to return to the storm damaged area.

Family Emergency Kit Checklist

Food, Water, Utensils

- ☐ Keep a one-week supply of non-perishable food per person.
- ☐ Keep a one-week supply of drinking water per person.
- ☐ Fill plastic jugs with drinking water when you receive warning of imminent danger.
- ☐ Maintain a supply of disposable eating and drinking utensils.
- ☐ Bottle and can openers.
- ☐ Special diet and baby foods.
- ☐ Supply of plastic bags.
- ☐ Map of area (for locating shelters).

Medications

- ☐ Prescription and non-prescription. Warning: Many medications have short shelf-lives. Do not place them in the emergency kit until the time of the emergency.
- ☐ Copy of all prescriptions.
- ☐ Prosthetic devices (eyeglasses, hearing

aids, etc.)

- ☐ First aid kit
- ☐ Emergency medical alert tags and cards
- ☐ Shot records

Clothing/Bedding (per family member)

- ☐ 2 pairs of socks
- ☐ 1 change of under-clothing
- ☐ 1 set of work clothes
- ☐ Raincoat with hood
- ☐ Walking shoes
- ☐ Coat
- ☐ Set of work clothes
- ☐ Heavy work shoes
- ☐ Hat and gloves
- ☐ Thermal underwear
- ☐ Sunglasses
- ☐ Sleeping bag or blanket and sheets
- ☐ Pillows
- ☐ Plastic sheeting

Personal Hygiene

- ☐ Soap, toothbrush, toothpaste, deodorant, etc.
- ☐ Shaving kit
- ☐ Feminine hygiene needs
- ☐ Paper towels, towel-ettes and toilet paper

- ☐ Plastic bags
- ☐ Laundry detergent

Baby Supplies (if applicable)

- ☐ Diapers
- ☐ Bottles and nipples
- ☐ Milk or formula
- ☐ Baby powder, creams, and ointments
- ☐ Rubber sheeting

Emergency Tools

- ☐ Pocket knife
- ☐ Shovel
- ☐ Ax
- ☐ Crowbar
- ☐ Hammer and nails
- ☐ Hand saw
- ☐ Pliers
- ☐ Tape
- ☐ Compass
- ☐ Aluminum foil

Important Papers (and other valuables)

- ☐ Social Security card
- ☐ Passport *
- ☐ Driver's License
- ☐ Deeds *
- ☐ Insurance policies *
- ☐ Stocks and Bonds *
- ☐ Will *
- ☐ Savings and check-

ing account books or account numbers

- ☐ Credit cards and/or account numbers
 - ☐ Currency
 - ☐ Inventory of valuable household goods *
 - ☐ List of important phone numbers (insurance agents, banks, family, etc.)
 - ☐ Birth Certificates *
 - ☐ Immunization record
- * Place in a waterproof secure box or a safe deposit box

Personal Items

- ☐ Playing cards
- ☐ Small toys for children
- ☐ Reading materials
- ☐ Sewing kits
- ☐ Writing materials

Communications/ Lighting

- ☐ Battery-operated radio and extra batteries
- ☐ Flashlight and batteries
- ☐ Lantern and fuel
- ☐ Candles and matches